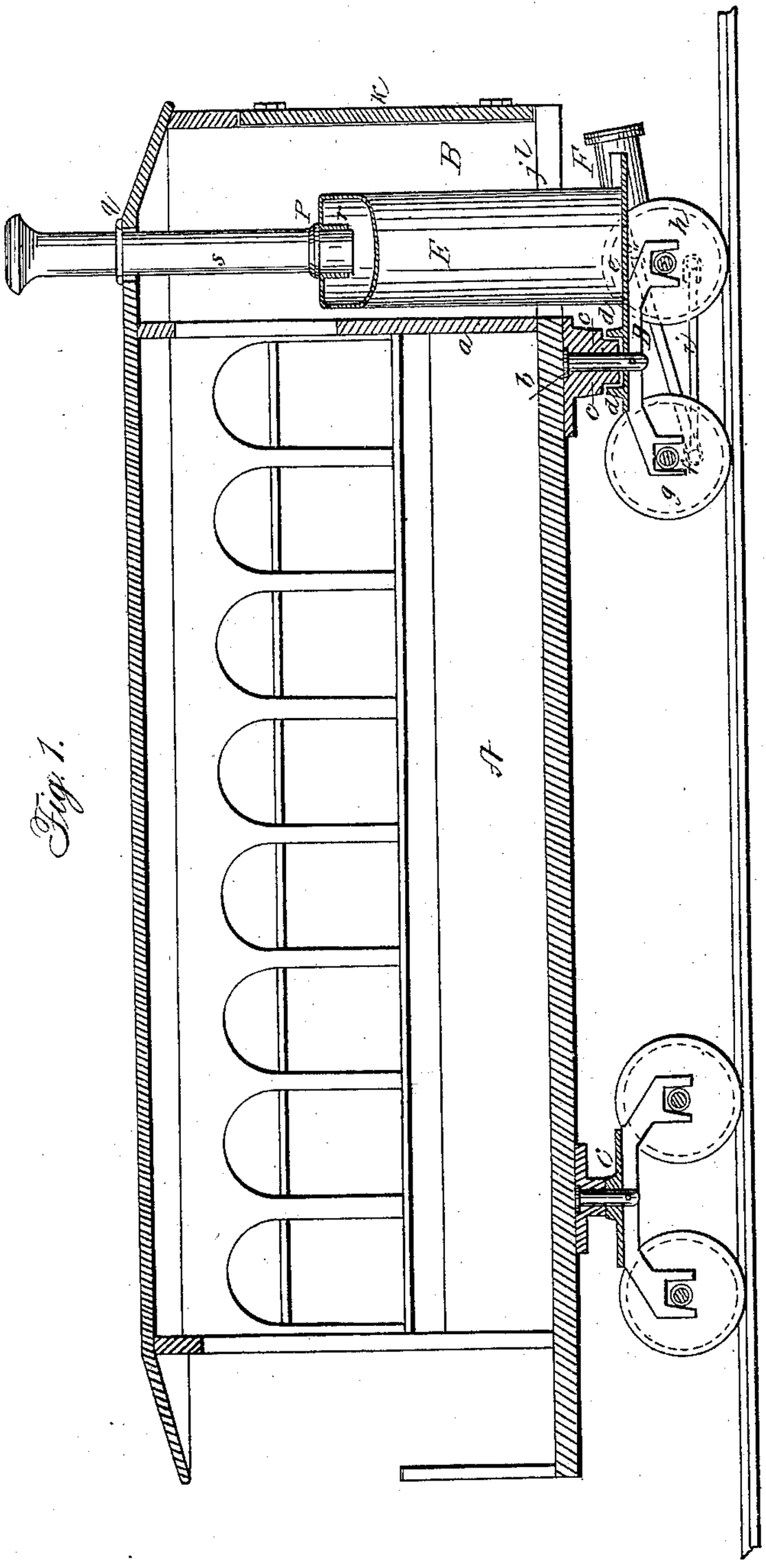
2 Sheets—Sheet 1.

S. SKILLMAN.

Dummy Engine.

No. 45,871

Patented Jan. 10, 1865.



Witnesses:

Henry T. Brown

F. W. Coombs

Inventor:

Sidney Skillman

2 Sheets—Sheet 2.

S. SKILLMAN.

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Fig. 4.

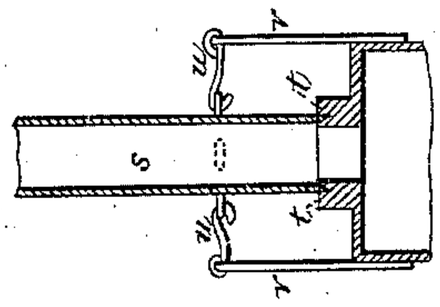


Fig. 3.

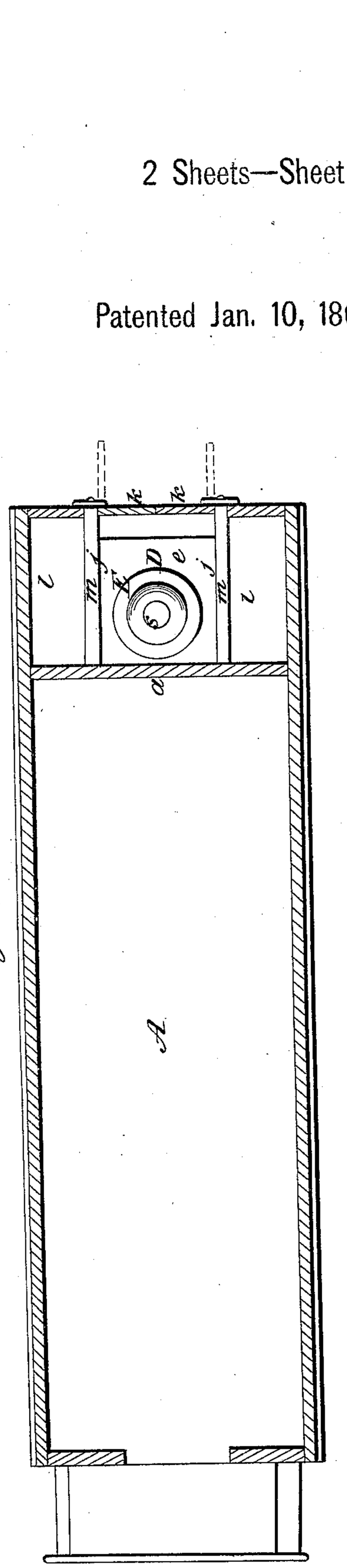
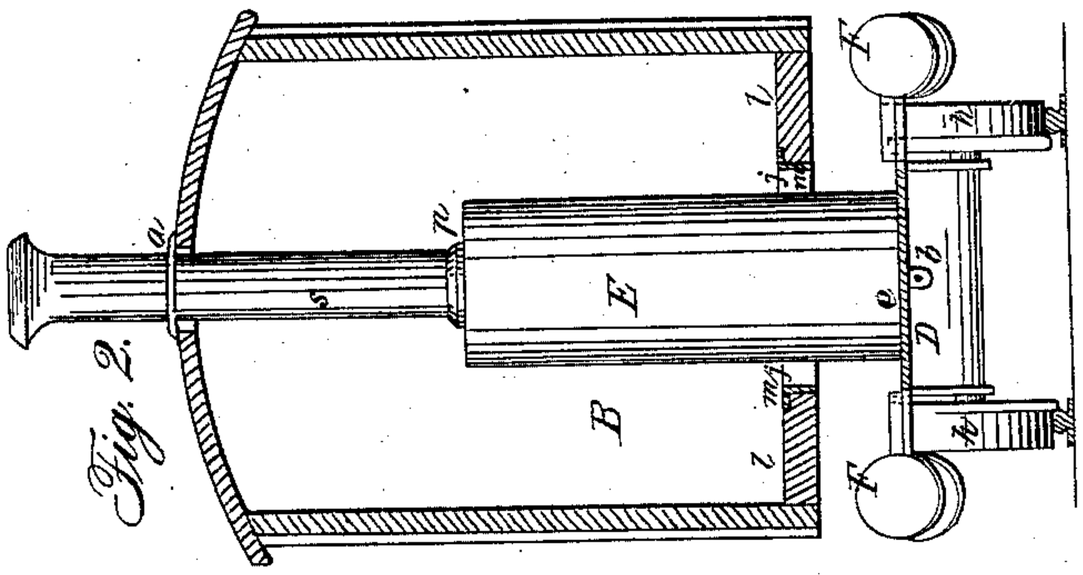


Fig. 2.



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Inventor:

Sidney Skillman

UNITED STATES PATENT OFFICE.

SIDNEY SKILLMAN, OF JERSEY CITY, N. J.

IMPROVEMENT IN RAILROAD-CARS.

Specification forming part of Letters Patent No. 45,871, dated January 10, 1865.

To all whom it may concern:

Be it known that I, SIDNEY SKILLMAN, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Locomotive-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section of a locomotive-car with my improvement. Fig. 2 is a transverse vertical section of the same, taken through the engineer's room or cab. Fig. 3 is a horizontal section of the same. Fig. 4 is a vertical section of the upper part of the boiler and lower part of the chimney.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to enable the engine and boiler of a locomotive car to be disconnected from the car and run out therefrom whenever it becomes desirable to do so for the repair of the engine, boiler, or car, or for any other purpose.

In order to carry out my invention, I make the engine and boiler independent of the car-body by attaching the engine to a truck, upon which the boiler is also supported.

My invention consists in a novel construction of the car-body, whereby, with a suitable arrangement of the engine and boiler upon the truck, the disconnection and running away of the truck, engine, and boiler from the car-body are facilitated.

It also consists in attaching the smoke-pipe permanently to such a car, and making it detachable from the boiler, to facilitate the running out of the boiler from the car with the engine and truck.

To enable others skilled in the art to apply my invention to use, I will proceed to describe it with reference to the drawings.

A B is the car-body, having a small separate room, B, partitioned off at one end for the engineer, and supported upon two trucks, C and D, one near each end. The forward truck, D, supported on four wheels, is pivoted to the bottom or floor frame of the car body just behind the partition *a*, which separates the engineer's room B from the portion A of the car devoted to passengers by a pin, *b*, which is firmly secured in a socket, *c*, that is firmly secured to and under the floor-frame; and this socket *c* also fits to a socket, *d*, on the platform *e* of the said truck, the said pin and sockets, with the construction of the car-body, hereinafter described, permitting the disconnection of the car-body from the said truck on the body being raised high enough to bring the socket *c* and the lower end of the pin *b* above the socket *d*.

The boiler E, made of upright form, so as to occupy little space lengthwise of the car, is erected upon that part of the platform *e* projecting forward of the partition *a*, and under the engineer's room or cab B, and stands up within the back part of the said room or cab, nearly close to the partition *a*, leaving room for the engineer to pass in front of it. The cylinders F F of the engine are bolted to the platform *e*, one on each side thereof, in positions slightly inclined from the horizontal, and the pistons are connected by the system of connections common to locomotives or by any other system with cranks on the axle *f* of the hind wheels, *g g*, of the truck D, which is the driving-axle. These wheels *g g* and the fore wheels, *h h*, of the truck *f* are represented as coupled by rods *i i*.

In order to admit the boiler within the engineer's room B, there is an opening, *j j*, provided in the floor of the said room, the said opening being wide enough to admit of the lateral movements of the car-body and the boiler relatively to each other, which take place in turning curves, owing to the pivoting of the truck D to the car-body.

In order to provide for the running out of the truck D, the engine, and boiler from the car the opening *j j* extends right through the front end of the car, and a door or doors, *k k*, are provided in that end of the car, to permit the boiler to pass out. The portions *l l* of the floor of the engineer's room on each side of this opening *j j* form stationary platforms for the engineer to stand upon to perform his duties, and upon which he is protected from being jammed between the boiler and the sides of the room in case of the car getting off the track, in which case the boiler can only move laterally relatively to the car as far as the sides of the opening *j j*, which is between the said platforms.

The platforms *l l* may be made of iron or if

made of wood, should have their edges protected by strong angle-irons *m m*, as shown in Figs. 1 and 2. They not only form safe places for the engineer, but form guards for the protection of the car body and boiler from injury in case of getting off the track.

The smoke-pipe *s* passes through an opening in the roof of the car. This opening may be extended through the front of the car above the doors *k k* to permit the smoke-pipe to pass out with the boiler; but I prefer to have the smoke-pipe attached to the roof of the car in such a manner that it may be disconnected from the boiler and left on the car when the truck D, engine, and boiler are run out.

In Figs. 1 and 2 the smoke-pipe is represented as having its lower end fitted into a socket, *r*, in the top of the smoke-box *n* of the boiler, and made with a collar, *p*, to rest on the roof of the car. The lifting up of the front end of the car-body high enough to withdraw the pin *b* and socket *c* from the truck D and leave the latter disconnected also lifts up the smoke-pipe from the socket *r* and disconnects it from the boiler, leaving it suspended by its collar *q* from the roof of the car.

In Fig. 4 the smoke-pipe *s* is represented with a flexible attachment to the top of the boiler. Its lower end enters a beveled-sided annular seat, *t*, on the top of the smoke-box of the boiler, and it is attached at some distance above the smoke-box, but within the car, by chains, links, or hooks *u u* to upright springs *v v*, secured to the top or sides of the boiler and projecting to a suitable height above the same. These springs allow the smoke-pipe to be inclined in either direction without being disconnected from the boiler, as is desirable in turning curves with the boiler on a truck and the smoke-pipe passing through the roof of the car, and the flexible connection which they form prevents the smoke-pipe from getting broken by the car running off the track. The smoke-pipe, thus connected with the boiler, should be attached to the car by a collar, *q*, like that shown in Fig. 2. When the truck, boiler, and engine are to be disconnected from the car, the hooks, links, or chains *u* must first be disconnected from the springs *v v* or from the smoke-pipe.

To enable the truck D, with the attached engine and boiler, to be run out from the car, it is only necessary to undo any fastenings that may be used to connect the lower end of the smoke-pipe with the boiler, then raise up the front end of the car by means of jacks on each side high enough to let the pin *b* and socket *c* clear the truck D and open the doors *k*, when, by turning on the steam, the engine may be run where required. By thus providing for the disconnection of the engine from the car the necessity of laying up either when the other requires repair is obviated, and greater facility is afforded for getting at the boiler and different parts of the engine.

When the truck D is detached, an ordinary truck may be put in its place to facilitate the removal of the car and to enable the car to be used as an ordinary passenger-car.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the placing of the boiler and engine of a locomotive-car on a truck in such manner that the boiler is received within a compartment at one end of the car, the construction of the car with such an opening in the bottom or floor, and a door or other suitable opening in one end, as to permit the boiler to pass out with the truck when the latter is run out from under the car, substantially as herein described.

2. The stationary platforms arranged within the car-body and in relation to the boiler and truck D, substantially as herein described, to serve as standing-places for the engineer and as a protection against injury in case of getting off the track.

3. In a locomotive-car having the engine and boiler detachable, attaching the smoke-pipe permanently to the car, substantially as and for the purpose herein described.

SIDNEY SKILLMAN.

Witnesses:
HENRY T. BROWN,
J. W. COOMBS.